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**Regulating Stem Cell Secretome Using Injectable Hydrogels with In Situ Network Formation.**

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**Funding Grants:** Injectable Hydrogels for the Delivery, Maturation, and Engraftment of Clinically Relevant Numbers of Human Induced Pluripotent Stem Cell-Derived Neural Progenitors to the Central Nervous System

**Public Summary:**

A family of shear-thinning hydrogels for injectable encapsulation and long-term delivery (SHIELD) has been designed and synthesized with controlled in situ stiffening properties to regulate the stem cell secretome. The authors demonstrate that SHIELD with an intermediate stiffness (200-400 Pa) could significantly promote the angiogenic potential of human adipose-derived stem cells.

**Scientific Abstract:**

A family of shear-thinning hydrogels for injectable encapsulation and long-term delivery (SHIELD) has been designed and synthesized with controlled in situ stiffening properties to regulate the stem cell secretome. The authors demonstrate that SHIELD with an intermediate stiffness (200-400 Pa) could significantly promote the angiogenic potential of human adipose-derived stem cells.

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